



COMBE'S PHRENOLOGY.

To sound the depths of Being—to arrest the fleeting, varying states of Consciousness, bringing them under the analytic eye—to trace the complex phenomena of mind unto their universal and determinate laws, and to dive into the very essence of our intellectual and physical constitution, have been the eternal impulses of man. Let us throw ourselves in the glooming darkness of the past and trace the faint struggles of the intellect to comprehend itself, and in the struggle, deluded by a glimpse of light, falling into the abyss of error; then view the streaks of light stealing along the horizon, and behold, but dimly shadowed forth from the surrounding mist, the glorious pathway of instruction, *that mysterious communion of wisdom with ignorance*, and sympathise deeply with the bold, though unstable systems of the Brachmans,—the dark, symbolical Egyptians,—the lively, susceptible, but deep thinking Greeks,—the subtle Arabians,—the acute, quibbling schoolmen,—the massive and farthoughted early English,—the bold, but scrutinising French,—the patient thinking yet self-opinionated Scotch,—and, finally, the dreamy, speculative, but comprehensive and astounding inquiries of the Germans! Let them all call forth our deepest sympathies, and our patient judgment of their errors; for they have treated, however unsuccessfully, “of man,” who, as Kant sublimely observes, “is a microcosm of the world;” and the science of man is therefore the highest possible science. For what purpose do we pursue science if not to ascertain the perfect relation of nature to man? and shall we then be ignorant of the relation of man to himself? (if we may so express ourselves.)*

The inquiries of ages have not yet erected a science of man free from systematic error—well! is that to be advanced as an argument that a science of man is not possible? If we have never achieved any one thing, is that a proof we shall never achieve it?

* Studio di conoscere te, e se ti conoscerai, tu sarai molto migliore, e più là lodare, che se lasciando te, tu conoscessi il corso delle stelle, la virtù delle erbe, la natura degli animali, e avessi scienza di tutte le cose terrestri e celesti.

Fra. Bartolommeo, Ammaestramenti degli Antichi.

Assuredly not. We deny that any science (except mathematics*) has been thus erected; and if it had, it still does not get rid of the immutable fiat of nature that we should wade through the multitudinous seas of Error ere we touch the wished-for shore of Truth. In by-gone inquiries there is much that is false, but there is also much that is valuable: all we want, then, is some fine Catholicism—some profound blending of these various truths, in the elaborate mosaic of one mode of human thought, and we have erected our science. That much has been done for psychology none will deny, still it is far from perfect. Mill's *Analysis of the Human Mind* is perhaps the most perfect of the school, and in spite of many errors, well worthy a profound study, until some truer work be written. There is, however, a science—or that which pretends to the name of a science—of late become popular (from a cause we shall hereinafter point out) which, despising this catholicism of which we speak, and viewing with supreme contempt the many efforts of a by-gone age, attempts to sound our Being, and to regulate this “microcosm of the world,” as easily as they would arrange and cultivate a garden.† Is not their folly shown in this indiscrimination of intellectual works? Plato, Socrates, Aristotle, Des Cartes, Bacon, Hobbes, Leibnitz, Kant, with a host of others—the first intellects of the finest ages—standing in antithesis to Messrs. Gall, Spurzheim, Broussais, Elliotson and Mr. Combe! *Scientia inflat!* as Bacon caustically remarks.

It is difficult to speak of phrenology without smiling, but we are unwilling to throw ridicule on that science upon which its students are so touchy; and as we are concerned here more with the fundamental parts of phrenology, than Mr. Combe's book, we shall resist the temptation of ruffling the feathers of this learned daw, and of exposing his self-complacency, as well as all the curious specimens of what he (facetiously) designates “reasoning,” that are to be met with in his work; therefore, although we have placed his work as the title for the Review, we would be understood not so much to examine his work as to examine the doctrines of phrenology. The many playful attempts at profundity exhibited by these philosophers we are compelled only to take an occasional glance at in our course, nor have we any desire to show off our scholarship in exposing the occasional bits of learning they favour us with; but at the same time we cannot help noticing the presumptuous ignorance of Broussais, who has given a sketch of the opinions of the

* Such sciences as dynamics, being limited only by mathematical limit, and being pursued and illustrated mathematically, of course come under this denomination.

† Phrenology, a double blunder in Greek and philosophy—*φρην* no more signifies mind than it does a potatoe; the proper term, if a Greek one must be used, is either craniology or encephalology (*εγκεφαλος* and *λογος*).

ancient philosophers on the soul in his Lectures on Phrenology (lectures in the *Lancet*), which is one mass of error; *not one* of the opinions there detailed were held by the men to whom they are ascribed! Yet these are the men who despise all their predecessors! It has been said, "every fool may be a philosopher"—the truth of which no one will defend; while no one will deny that "every fool may a phrenologist." Though our courtesy will not admit of our inverting the sentence.

But a truce to all recrimination on either side—let our inquiry go to the very heart of the subject, and be only concerned therewith. A method of investigation is suggested to us, as the only proper one for such an inquiry, which, if it be tedious, has at least the merit of embracing the subject; with no further apology, then, for *length*, we proceed in our inquiry,—

1st. IS PHRENOLOGY, AS A SCIENCE, TRUE?

2nd. IS PHRENOLOGY, AS A SCIENCE, POSSIBLE?

And first, "*Is it true?*"—SECTION I. *On Facts.*

"Phrenology is a science of facts, not hypothesis; if, therefore, the facts are true, the science is true." This may be considered as their resting stone—the answer to all objections, and merits our first attention. But it is of itself absurd; the facts may be true, yet the science false. We stop not here to criticise the nature of the facts, or to record the violent obstinacy of our prejudiced mind in not believing some of them; such as, deaf people delighting in music—deaf people dancing correctly to time; the facts of the similarity of the pictures of Jesus Christ to Jupiter, and the whole host of entertaining facts which are cited in its favour; but will content ourselves with the simple and credible. "Facts are stubborn things," then (to apply the witticism of a friend of ours) phrenologists are facts. But we are about to show that facts are not the stubborn things they have been taken for, at any rate they are not so valuable to hypothesis as generally supposed; it is not facts, but the *application* of facts, which gives support. A fact explains only itself—is true only itself; it is the *application* and the *inference* deduced from that fact, which are the points to be tested, and which are the difficulty. No system, however monstrous, has been found wanting in facts. Judicial astrology, alchemy, animal magnetism, second sight, the vortices of Des Cartes, &c. have all boasted triumphantly of facts, and facts they truly had, but got no legitimate assistance from them; for, as we before remarked, a fact only is true to itself; *e. g.* it is a fact that a man has a bloated face;—now this is the sum total of *the fact*, from which the *inference* is that he is a toper, and in nine cases out of ten this inference is correct; yet from various morbid causes, the sanguineous system is frequently in such

a state, as to present a similar bloated appearance when the individual is exceedingly temperate ;—here our inference as to his drinking would be wrong ; and to explain this appearance we must go to a *higher* fact. This plainly demonstrates, we conceive, our position, that in the *application* alone consists the value of facts. Let us now illustrate a phrenological fact in this way. In treating of amativeness, Combe says, “ Dr. Gall was led to the discovery of this organ in the following manner :—He was a physician to a widow of irreproachable character, who was seized with nervous affections, to which succeeded severe nymphomania. In the violence of a paroxysm he supported her head, and was struck with the large size and *heat of the neck*. He stated that heat and tension of these parts always preceded the paroxysm. He followed out the idea suggested by this occurrence, of connexion betwixt the propensity and the cerebelleum, and *he soon established the point to his own satisfaction*.” Now here the concurrent facts are nymphomaniacal paroxysm, and *heat* at the back of the neck. The fair *inference* was, that the paroxysm caused the heat and tension, but Gall was not satisfied with this inference ; now he might have *discovered*, while he was about it, that the *face also was in a state of unusual heat and tension*, and in consequence have as much right to assume that the organ of amativeness lies in the face, as the back of the neck. But it may be objected, that subsequent facts have confirmed Gall’s idea. Have they *really* ? we shall see anon. We here cite it in illustration of the doctrine of facts.

That phrenology is capable of *explaining* many things, if not all things, none more ready than ourselves to admit ; but so did the pre-established harmony with which Leibnitz amused the world ; so did the vortices of Des Cartes ; so did the idealism of Berkeley, and the vibrations of Hartley ; but that either hypothesis gives the true explanation we deny. “ Hypotheses,” as Hazlitt truly remarked, “ make facts fit them, not the hypotheses fit facts.”

The purpose of this section is fulfilled, if it convince the unbiassed reader, that the loud talking about facts by the phrenologists, will not advance their science if otherwise imperfect, which “ otherwise ” we intend to show.

SECTION II.—*Phrenological facts proved to be suicidal, from the disagreements among themselves.*”

“ Who shall decide when doctors disagree.” This same system of phrenology being entirely one of fact and observation, no *à priori* argument, no hypothesis being admitted, it may be deemed a bold attempt on our part to prove their very observations of facts are *suicidal* ; but we will endeavour to do it, and leave the reader to judge.

Before entering on the subject, a word or two is necessary. It has been urged, as a counter-argument to the admitted disagreements of phrenologists, that there is no science, except mathematics, wherein there is not disagreement among its professors; and that the differences of phrenologists do not affect the main principles. Now the former argument is in perfect keeping with the vague nature of their reasoning in general, and the latter is, as we shall shortly perceive, false. The differences we refer to are, not that "Dr. Gall ridiculed the bumps of Dr. Spurzheim; Dr. Spurzheim rejects with disdain the callipers of Mr. Combe; and Mr. Combe has been lately engaged in an open phrenological warfare with one of the most intelligent of his contemporaries;"—but such as are sufficient to overturn the whole science. Let the reader bear in mind that the whole science is assumed to be one of facts—of extensive observation; that it arose from the peculiar curiosity of Dr. Gall, "who," Dr. Spurzheim tells us, in an article in the *Foreign Quarterly* (No. III.), "like many other boys, was fond of looking for bird's nests," (we think that this must be a misprint, "*mare's nests*" is the word). This curiosity led Gall to make many thousand observations, all of which confirmed his theory. Let this point be remembered, for we are about to show that many thousand phrenological observations have been made, by phrenologists, which, of course, are entitled to equal credit, and which unfortunately destroy the previous observations. We cannot do better than subjoin a comparative table of the results to which these indefatigable men have arrived.

<i>Dr. Baimes.*</i>	<i>Gall and Spurzheim.</i>	<i>Villers.†</i>	<i>Combe.</i>
I. Organ of tenacity of life.	Amativeness.	Medulla oblongata, la force vitale.	Amativeness.
II. Self-preservation.	Philoprogenitiveness.	Amativeness.	Philoprogenitiveness.
III. Selection of food.	Concentrativeness.	Philoprogenitiveness.	Concentrativeness.
IV. Organ of external senses.	Adhesiveness.	Adhesiveness.	Adhesiveness.
V. Instinctive sexual union.	Combaticiveness.	Combaticiveness.	Combaticiveness.
VI. Philoprogenitiveness.	Destructiveness.	Secretiveness.	Destructiveness.
VII. Friendship.	Constructiveness.	Cautiousness.	Secretiveness.
VIII. Courage.	Acquisitiveness.	Memory of things.	Acquisitiveness.
IX. Murder or Assassination.	Secretiveness.	Locality.	Constructiveness.
X. Cunning.	Self-esteem.	Language.	Self-esteem.
XI. Circumspection.	Love of approbation.	Verbal memory.	Love of approbation.
XII. Vanity, conceit or self-love.	Cautiousness.	Number.	Cautiousness.
XIII. Love of glory.	Benevolence.	Music.	Benevolence.
XIV. Love of truth.	Veneration.	Mechanical arts.	Veneration.
XV. General memory, otherwise called sense of places and things.	Hope.	Goodness.	Firmness.
XVI. Sense of colours.	Ideality.	Observation.	Consecutiveness.
XVII. Sense of numbers.	Conscientiousness.	Generosity.	Hope.
XVIII. Musical sense.	Firmness.	Penetration.	Wonder.
XIX. Sense for mechanics.	Individuality.	Imagination.	Identity.
XX. Verbal memory.	Form.	Theosophy.	Wit.
XXI. Sense for languages.	Size.	Self-esteem and love of approbation.	Imitation.
XXII. Memory of persons.	Weight.	Firmness.	Individuality.
XXIII. Liberality.	Colours.		Form.
XXIV. Talent for satire.	Locality.		Size.
XXV. Talent for comparing things.	Order.		Weight.
XXVI. Metaphysical talent.	Time.		Colouring.
XXVII. Talent for observation.	Number.		Locality.
XXVIII. Goodness.	Time.		Number.
XXIX. Theatrical talent.	Language.		Order.
XXX. Theosophy.	Comparison.		Eventuality.
XXXI. Perseverance.	Causality.		Time.
XXXII. Incogitum.	Wit.		Tune.
XXXIII. Ditto.	Imitation.		Language.
XXXIV. Ditto.	Wonder.		

* One of Gall's earliest and most assiduous pupils.

† Letter de Charles Villers a Georges Cuvier sur une Nouvelle Theorie du Cerveau, par Dr. Gall.—*Metz*, 1802.

We defy phrenologists (who can reconcile almost any thing) to reconcile these. Nay more, Sir Everard Home, whom every one will allow was as deeply versed in the internal and external structure of the brain as any of the phrenologists, had a tendency towards phrenology, (*see Philos. Trans.* for 1821,) and the result of *his* investigation was to place memory and concupiscence on and bordering on religious veneration in Gall's system! The organ that Dr. Gall first called *courage*, he afterwards called *quarrelsomeness*, and still later *self-defence*—now the faculties of self-defence and quarrelsomeness are as opposite as those of light and darkness; while courage is distinct from both. Gall asserts that we have but one organ for murder, and two for theft—daring and cunning circumspect theft. Spurzheim contends that the second stealing organ of Gall manifests nothing more than a general propensity to secresy.* But not to tire the reader—is it not now evident that as we are forced to bestow the same credence on the facts of one phrenologist as on those of another, when they have been collected by any range of observation, so when one class of facts are made to prove the existence of one organ, and the same class of facts are also made to prove the existence of a totally opposite organ in its stead, are they not virtually suicidal?—do they not destroy each other? *Probatum est*, Q. E. D.

SECTION III.—*Phrenological Facts (even if not suicidal)
proved to be no Facts at all.*

This is another startling proposition, but we approach it with due confidence. Mr. Stone published a pamphlet which has never yet been answered, and which we defy phrenologists to answer. In his pamphlet he presents the reader with the results of the most stupendous and Baconian induction—metaphysical contradictions are here eschewed, and the *facts* of which phrenologists boast so much are proved satisfactorily to be no facts at all. We subjoin the result:—

I. By comparing the crania of eighteen murderers with two extensive series of crania, he has proved that the crania of these criminals are NOT characterized by *any superior development of destructiveness*; and that instead of that region being *broader* it is frequently (in the murderers) *much narrower* than crania in general.

II. The superior part of the cranium, to which region they have assigned the *moral sentiments*, is frequently found *higher and better developed in the crania of murderers* than in crania in general.

* Dr. Good's Book of Nature, vol. iii. sect. xiii.

III. The cerebellum of *Burke* (the horrible murderer) in contradiction to his acknowledged character, *below the average*—proved by its weight having been compared with the weight of the cerebella in forty-four subjects, male and female adult and impuberal; also by the size of the cerebellic cavities in his cranium having been compared with fifty-one crania, including thirty-three adult male—thirty-two adult female—six impuberal female.

IV. Notwithstanding the scrofulous disease which *Burke* had laboured under for many years, neither lobe of the cerebellum was diminished in size.

V. The crania of murderers have not been found to exhibit any deficiency of *anterior* development; and sometimes in contrast with other crania, the anterior region is even fuller and better developed in such criminals than in crania in general.

VI. The *posterior* development (to which region the *animal propensities* are referred) has not been found to exhibit any remarkable preponderance in the crania of murderers.

VII. The region of acquisitiveness has not been found broader in notorious thieves than in individuals of exemplary character, and sometimes even narrower—proved by the distance from acquisitiveness to acquisitiveness having been taken in twenty-two thieves, and compared with the same dimensions in various persons, English, Scotch, and Irish, each class of individuals having been taken without any selection.

VIII. By a comparison of the heads of the same individuals thieves are found to possess *conscientiousness more highly developed than individuals of exemplary character*.

Let us also advert to the negroes, upon whose paucity of intellectual power so much stress has been laid. Dr. Good, in his *Book of Nature*, vol. ii. p. 98, *et seq.*, says,—

“The variable talents of the mind are as propagable as the variable features of the body,—how, or by what means, we know not,—but the fact is incontrovertible. Wit and dulness, genius and idiotism, run in direct streams from generation to generation; and hence the moral character of families, of tribes of whole nations. The understanding of the Negro race, it is admitted, is in many tribes strikingly and habitually obtuse. It has thus, indeed, been propagated for a long succession of ages; and, till the Negro mind receives a new turn, till it becomes cultivated and called forth into action by some such benevolent stimulus as that which is now abroad generally, and especially such as is afforded it by the African Institution of our own country (an establishment that ought never to be mentioned without reverence), the same obtuseness must necessarily continue, and by a prolongation of the habit, may, perhaps, even increase. But let the man who would argue from this single fact, that the race of Negroes must be necessarily an inferior species, distinct from all the rest of the world, compare the taste, the talents, the genius, the erudition that have at different periods blazed forth in different individuals of this despised people, when placed under the fostering providence of kindness and cultivation, with his own or those of the generality of his own countrymen,

and let him blush for the mistake he has made, and the injury he has committed.

"Freidig, of Vienna, was an excellent architect, and a capital performer on the violin; Hannibal was not only a colonel of artillery in the Russian service, but deeply skilled in the mathematical and physical sciences; so, too, was Lislet, of the Isle of France, who was in consequence made a member of the French Academy; and Arno, who was honoured with a diploma of doctor of philosophy by the university of Wirtemberg, in 1734. Let us add to these the names of Vasa and Ignatius Sancho, whose taste and genius have enriched the polite literature of our own country; and, with such examples of Negro powers before us, is it possible to do otherwise than adopt the very just observation of a very quaint orator, who has told us that the 'Negro, like the white man, is still God's image, although carved in ebony?'

"Nor is it to a few casual individuals among the black tribes, appearing in distant countries, and at distant æras, that we have to look for the clearest proofs of human intelligence. At this moment, scattered like their own oases, their islands of beautiful verdure, over the eastern and western deserts of Africa, multitudes of little principalities of Negroes are still existing,—multitudes that have, of late years, been detected and are still detecting, whose national virtues would do honour to the most polished states of Europe: while at Timbuctoo, stretching deepest towards the east of these principalities, from the western coast, we meet, if we may credit the accounts we have received, with one of the wealthiest, perhaps one of the most populous and best governed cities in the world; its sovereign a Negro, its army Negroes, its people Negroes; a city, which is the general mart for the commerce of Western Africa, and where trade and manufactures seem to be equally esteemed and protected."

Moderate enquirers would here "cry hold enough," and urge us to place Q. E. D. and finish the section; but we are not moderate enquirers, and at the risk of prolixity, shall pursue our route still further, for we do not place startling propositions at the commencement of our sections with the intention of amusing ourselves—we mean to *prove* them. As phrenologists are very sceptical of any facts, not immediately confirming their system, we shall not trouble them with the counterfacts of our own observation, though they are not few, but will go to unquestionable authorities.

Sir C. Bell, the most accomplished physiologist of the day, and one who has made the nervous system his especial study, says, "but the most extravagant departure from all legitimate modes of reasoning, *though still under the colour of anatomical investigation*, is the system of Dr. Gall. It is sufficient to say, that without comprehending the grand divisions of the nervous system; without a notion of the distinct properties of individual nerves, or without having made any distinction of the columns of the spinal marrow; without even having ascertained the difference of cerebrum or cerebellum, Gall proceeded to describe the brain as composed of many particular and independent organs, and to assign to each the residence of some special faculty." *Philos. Trans.* 1823, p. 306.

Dr. Milligan, in the appendix to Majendie's Physiology, gives some remarkably important observations on the relation

between the external and internal tables of the skull, by which he has unquestionably shown that *the visible cranium has no relation whatever to the form of the brain*. We entreat the reader's attention.

"The *inner* or vitreous table performs uniformly one office. It closely follows and embraces the figure of the brain, receiving the impression of every convolution, and penetrating into every fissure, with as much exactness, though not quite so deeply, as the membranes themselves." Here we pause to remark, that it is from this circumstance phrenologists have assumed the cranial development to correspond with cerebral development; how erroneously the conclusion of Dr. Milligan's remarks will point out. "Meanwhile the *external table* is no more a mere organ of defence than the muscles which cover it; it is an organ of *coaptation* or *articulation*, and accordingly is found *impressed, elevated, and configurated entirely according to the necessities of this adaption*, (not according to the cerebral convolutions). Hence that line of it, which corresponds to the transverse suture of the face, is exactly adapted to the bones of the opposite margin of this suture, being thick where they are thick, thin where they are thin, serrated where they are serrated, and harmonic where they assume this appearance. It *exhibits no relation to the internal table* till being again turned inwards along the roof of the orbit, it reapproaches and coincides with it to form the thin edge, which, like another squamous portion, is to ride upon the *alæ minores* of the sphenoid bone.—*The external table then of the frontal bone is, in reality, a bone of the face*; hence its development or growth, depends entirely on the growth of the bones of the face; for it has never been seen narrower or broader than the distance from the external orbital process of the one malar bone to the other, nor placed so close to the internal table, and *crista galli*, that it was overlapped by the bones of the nose, or by the superior maxillary and malar bones. It follows then, from what is said above, that the development of the internal table, and consequently of the frontal bone, follows the development of the brain; but the *development of the external table of the frontal bone follows the development of the bones of the face*. Now the brain arrives at its full size in the seventh year, which, therefore, is the period for completing the development of the internal table of the frontal bone; but the bones of the face continue growing to the 21st year, and hence anatomists find the dimensions of the frontal sinus go on increasing to that year."

We now ask, is not the absurdity of this science fully shown, viewing it from its own *experimentum crucis*? The whole collection of observations their industrious men have made, is handed over to oblivion, seeing that "phrenological facts are no facts at all." Q. E. D.

SECTION IV.—*The Anatomical Facts of Phrenology.*

Facts are again to be brought before the reader—we delight as much in writing down the word, as phrenologists; because viewed metaphysically, ethically, or physiologically, we conceive the doctrine presents one mass of absurdity, not worth the trouble of treading on—but when men appeal to facts—when they say, leave theories alone, and come to the test of facts, there is something high sounding in it, and we are perhaps imposed on. “The favourers of craniology,” says Dr. Copeland, “appeal to facts, assert that it is eminently a science of observation and rational induction, and call upon those who oppose it, to make themselves acquainted with its principles and details, and then judge for themselves. This seems candid and rational: but unfortunately, when their advice is followed, and facts are observed which militate against their theory, they endeavour to rid themselves of the difficulty by asserting that the observer is mistaken, and unacquainted with its principles; thus, virtually denying that any one can be acquainted with the doctrines unless he become likewise a convert to a belief in them.” —*Appendix to Richerand's Physiology*, p. 688.

Combe says, “In new born children the cerebellum is the least developed of the cerebral parts,”—the only objection to which is, that it is quite contrary to fact! The cerebellum is earliest developed in the fœtus, and indeed might now be so predicated, since it is admitted by all who know anything of the nervous system, that the cerebellum is concerned with the vital functions, while the cerebrum is alone concerned with the intellectual and sensory,—seeing, therefore, that in the infant the vital and muscular functions are more developed than the intellectual and sensory, one might see at a glance that the cerebellum must be the earliest developed—but we refer to Tiedeman and Serres for confirmation. Mr. Combe also states that the proportion of the cerebellum to the cerebrum in the adult is as 1 to 6, 7, or 8, whereas Cuvier, Blumenbach, Lawrence, &c. make the average 1 to 9.

We once saw a lecturer point out to his admiring proselytes a place in the skull of a murderer, which he said from the great action of the organ, had *worn it quite thin*, and he placed a lighted candle into the skull, in order to show how thin and transparent that portion of the skull which phrenologists had established as the region for the organ for murder (*destructiveness*) had become. Here is a fact, said he, which defies contradiction? Now we are of a sceptical tendency, and so far from our viewing the fact as conclusive, we thought it worth looking into. The fact that the skull was thinner in

that part than another, was evident, but (*ut Sect. I.*) it only explains itself—the inference we deny. Phrenologists, when they explain how the convolutions of so soft a substance as the brain, can produce corresponding elevations on so hard a substance as the skull, recall to our minds, that the skull of the child is not yet completely ossified, and consequently easily yields to the internal action of the brain. All this is very well, but they are obliged to have recourse to the child, knowing well that on the completely ossified skull no impression would be made. Now it must first be borne in mind that the effect of the internal action is at all times to *elevate*, not to *wear away*—(as may be sufficiently proved by examining any number of skulls). Secondly, That the skull, though soft and yielding in the infant, becomes hard and firm as the individual approaches to maturity; and it is the position phrenologists (necessarily) occupy, that it is during childhood the external developments are formed.

In the skull exhibited, (that of a notorious murderer,) the individual, therefore, must have had his murderous propensities evolved after maturity, or (*according to our first position*,) the external development would merely have been that of an *elevation*—but this is absurd—for if his murderous propensities had been evolved after maturity, it follows (*from our second position*,) that *no corresponding external development would have ensued*, as no one, in his senses, will be hardy enough to contend, that the mere pulsation of one square inch of brain, would be powerful enough to so act on the firmly constructed and impenetrable substance of the skull, and which according to Dr. Milligan's demonstration it cannot affect.

It may not be here necessary to do more than refer to the recent experiments of the French physiologists, originating in *Flourens*,* the result of which has been to establish that the cerebrum is the exclusive seat of sensations and volitions, and the cerebellum of the power of controlling and regulating the muscles, and as if these results were insufficient to overturn phrenology, upsprings pathology, giving us incontestable facts that admit of no phrenological reply—one of the most striking was given in *Andral's Lectures*, (*Lancet*, 1836. *Lect. 12.*) where the reader will see the most astounding case, such as of itself is sufficient to overthrow phrenology; by shewing that precocious tendency to sexual passion may be exhibited by an individual *without a cerebellum*.

Again: Brain has only three distinct parts; the cerebrum, cerebellum, and medulla oblongata, and it is natural to suppose*

* And more particularly from *Bouillard's* "Recherches cliniques et experimentales à refuter l'opinion de M. Gall, seu les fonctions du Cervelet."

“ these three parts have distinct purposes, as the seat of thinking and of the senses ; the seat of the local senses of sight, sound, taste, and smell ; and the seat of that general feeling diffused over the body ; but the nice hand of the anatomist had confounded even so rational a speculation as this, by proving that many of the nerves productive of different functions, originate in the same division of the brain ; while others, limited to a single function, originate in different divisions of it ; as it is hereby shown that we know nothing of the reason of this palpable conformation, nor the respective share which each of these grand divisions takes in producing the general effect ; how fanciful and presumptuous must it be to partition each or any one of these divisions into a number of imaginary regions, and to guess, for, after all, it comes to nothing more, at the respective boundaries of our own conceit.”*

In short, as Richerand truly remarks, the more we know of the brain, serves only to show how much more we are ignorant of. But we are reluctantly compelled by want of space to discontinue this section, nevertheless, we trust there is enough in it for its purpose ; the student will prosecute the rest of the inquiry for himself.

SECTION V.—*General Observations.*

Our subject grows under our hands, and yet we have not half completed our task. Reluctantly we give over the more extended view, and must conclude the first part of our enquiry with a few general observations.

Viewed analytically, the phrenological division of the organs is insurmountably absurd ; but the professors object to this view, and we shall not touch on it. Upon the nature of organs much has been written, and when we asked for a proof of the elementary nature of an organ—when we asked phrenologists how they knew an organ to be primitive, they replied—“ That organ which is singly active and singly passive, singly healthy and singly diseased, singly powerful and singly weak, *must* be a primitive one.” A mode of reasoning perfectly phrenological, by which it may equally be proved that man is a primitive element.

Let one word be said on “ Tune.” The difference between a musical and an unmusical ear has often been observed, some wondering how others cannot delight in music. Phrenology explains this difference. We will give Sir Everard Home's explanation, and those who prefer the phrenological one, after reading it, may do so. All depends upon the laxator obliquor and tensor muscles producing different degrees of tension in

* Dr. Good's Book of Nature, vol. iii. p. 326, and Study of Medicine, vol. iv.

the *membrana tympani*. If the tension be perfect, all the vibrations, produced by the action of the radiated muscle, will be correct, and the ear musical, analogous to the tension of a drumhead. If, however, the first adjustment is imperfect, although the action of the radiated muscle may still produce variations, they will not be correct, and the ear unmusical. Of the duplicate organs there is no proof but the assertion of phrenologists—quite enough, however, for phrenological proof. It is “presumed” that as we have two ears, two eyes, we have two tunes, two of wit, two of self-esteem; and as we have but one nose and one mouth, so it is “presumable” that we have only one love of children and one veneration!

It is remarkable that not only absurdity, hypocrisy, gluttony, drunkenness, sensuality, mirth, melancholy, lying, swearing, back-biting, envy, have not organs allotted to them; there is one for love of children, but none for love of parents or relations; there is one for the ideal in poetry, but no organs for the other poetical qualifications! It may be replied, that absurdity is the absence of wisdom, or a want of development in comparison and causality; that gluttony, sensuality, and drunkenness are owing to the want of intellectual development, and the victim giving himself up to the enjoyment of his senses; but this won't get rid of the difficulty, and on that reasoning we may account for all the other organs without phrenology. There is an organ for “wit or mirthfulness,” says Mr. Combe, but it is obvious that mirth and wit are as different as drunkenness and amateness. Phrenologists may reconcile these difficulties as they please; but they are conjurers, indeed, if they can tell us how it is that they have created a system of the mind omitting thought, feeling, and will! for it is impossible that the separate organs (things individual) should have thought as a condition (which is general). Besides, no one would contend that tune, language, amateness, are in themselves thought—neither can they be feeling—neither will. If it be said that each organ possesses its feeling, thought, and will, then it follows that man has a number of little distinct minds, not one mind!

Then, again, there are three organs for which the eye administers: size, form, and colouring—(we say nothing about the identity of size and form)—while the ear has only one tune—yet tune does not embrace all that a musical ear expresses, since melody and harmony are very different. Oh! this beautiful science! “When the executed criminal is cut down, the body is generally thrown upon its back, and the blood which, in cases of death by lightning, drowning, hanging, &c. remains uncoagulated, gravitates towards the depending parts of the person; a considerable distension of the back, neck, and pos-

terior parts of the head is thus produced, and over this distension the cast is taken. The organs of the alleged animal propensities are in consequence made to appear very large, whilst those to which the intellectual faculties and moral sentiments are subscribed, for the same reason and from the contrast, present as remarkable an appearance of deficiency." After this, let no more criminals be brought forward as proof.

Perhaps phrenologists can explain upon their principles the indisputable fact of a total and often sudden change of character,—sometimes from bad to good, and good to bad; at others an intellectual change, which latter, as we have ourselves experienced in a traceable manner, we can find no phrenological explanation of?

But we must here break off an investigation into the truth of that which shows falsehood at every step.

II. IS PHRENOLOGY AS A SCIENCE POSSIBLE?

We sincerely wish our limits allowed our entering deeply into this subject, as it is, perhaps, more important than the former part, since, if the science be true, yet not possible in its application, it is a useless toil. We will endeavour, in a few words, to show how impossible it is to be applied. In this enquiry we suppose the principles of phrenology to be admitted. Dr. Spurzheim (*Physiog. Syst.* p. 240) admits that "*the organs are not confined to the surface.*" Since, then, all the organs are not superficial, the expansion of any one deeply seated would have no corresponding external development; and as one organ lying under another would not, in its development, manifest itself, but the one under which it was, error is irremediable: Thus, the organ of envy—for it must have an organ, though no suitable one has hitherto been observed—lying under the organ of conscientiousness, it would be the latter whose development would be marked on the skull!

Besides, an organ may be so extremely developed as to push the neighbouring organs from the places usually occupied by them; and sometimes several organs in the vicinity of each other are equally or proportionally developed, so that, in place of a protuberance from which the indication might be taken, a smooth or regular surface is met with. In the latter case, however, they console themselves with saying, "there will be a general fulness of the corresponding part of the head." But it is answered, that, notwithstanding the fulness, there is no development, and that to say it is a proof of a greater quantity of brain is of no avail, since quantity is not gnomonic of energy, as is admitted by Dr. Spurzheim and others, who, having discovered that some animals have larger brains, and not so much intelligence as man, were forced to relinquish the

position that size and energy are convertible. As it is an acknowledged fact that the *absolute* bulk of the brain is no measure of intellect, so it is fruitless to assert that there is a connexion between the *relative* bulk of different portions and the energy of different faculties. "Here we may notice," to use the words of one of the acutest opponents to phrenology, "a redoubtable quibble in the principles of phrenology, which has frequently been played off against such as have objected to the size of the organs—the only test of the system—against the truth of a development. The size of the organs, say they, is gnomonic of energy, and indicative of power; *but no external sign points out the activity of the organ, and it is upon this same activity that the character depends. The activity of the faculties is ascertainable only by the actions of the individual* When Dr. Gall found it necessary, to cover the exceptions which were continually occurring to the rule he had laid down, to resort to the relative activity of different faculties, of which *size* was no result, or origin, or criterion, from which, therefore, no character can be predicated, and without which no estimate could be made, did he not virtually give up his system? Was it not a confession that the size of the different convolutions could not be depended upon alone? And yet, what but the size alone, previous to a knowledge of the actual character, was there to furnish materials for judgment? Of what else can the manipulator be observant?"—(*Foreign Review.*)

But some phrenologists think that the difference of temperaments will account for the discrepancies of observation, and form a criterion by which to judge of size. There are four separate temperaments laid down: the Lymphatic, Bilious, Nervous, and Sanguineous. An organ moderately developed on the cranium of one individual will be equal, in power and activity, to a considerably larger development in an individual of another temperament, and *vice versâ*. But one great error has been overlooked. Admitting their position as true, it will follow as a consequence that these temperaments exert a modifying influence which must defy calculation, since, although for convenience we lay down the broad principles of the temperament, yet, in reality, a dozen men, all possessing certain indications which would cause them to be classed under the same temperament, will nevertheless exhibit *as great variation in the shades and degrees of temperament as they do in countenances or feelings*; this variation will induce variation, and how is it possible for the phrenologist to form his estimate? Add to this the thousand thousand circumstances that serve to develop the various phases of our Being, and which in no two individuals are precisely similar, giving rise to the opinion that the differences of intellectual character are owing to them,

these things, which none can know, will always prevent an estimate being formed.

Again, the convolutions at the *base of the brain* must be organs, as well as these at the top. What are they? we do not know. How can we make a balancing power for their action? Not at all. The organs have so many different channels of acting, that we must always *guess* at the one it takes; thus, acquisitiveness may be either theft, love of knowledge, love of gold, love of power, love of amassing relics, curiosity, with equal truth to phrenology—how are we to say which it indicates? Secretiveness in an individual shows that he may be either prudent, sly, or cunning—lying, duplex, and deceitful—a thief, an actor, a grave humourist, an ironical writer, a story-teller. It is necessary to constitute dignity of character, and serves as a defence against prying curiosity! And yet Dr. Spurzheim can calmly say, “it is not always necessary to touch the head; in many cases the eye is sufficient.” This multiplicity of channels through which an organ may act, although it will always prevent any available estimate, gives a cover to the phrenologist when he has made a false assertion; for were he to tell a miser that he was religious, and it turned out quite otherwise, he would find refuge in the *idolatry of gold!* Yet avarice and religion!

How can phrenology be applied? It has been shown, that size of organs is no test—that temperaments modify sensibly, but are in themselves not to be recognised.—That *activity of the organs* gives them their character, and that no external sign points out this activity, but it is discernible by the actions of the individual alone; and when you know a man's actions, you have no need of phrenology to tell you what he is.—That, as by their own principle no character can be estimated without forming an estimate of the counteracting influence of the separate organs and temperaments, so not having pointed out half the organs, and some of them (those at the base of the brain,) it being totally impossible ever to arrive at a knowledge of, no balance can be struck, no estimate formed.—*That the external configurations do not correspond with the internal convolutions, and must always induce error.*—*That the multiplicity of ways in which an organ acts is an irremediable barrier to predication of character;* a bump for instance, only intimates that the individual possesses secretiveness; its mode of acting may (among various others,) be rather that of a thief, a hypocrite, or a grave humourist! which of these it is utterly impossible to decide until we *know his character*, and then, “there needs no ghost to tell us that.”

Phrenology panders to the ignorant, by abusing in wholesale terms those whom the learned regard with admiration—it sets

forth with the ridiculous arrogance of ignorance, a science with the boasting motto of “*Res non verba quæso*,” (poor Mr. Combe, that is the motto to thy book!) which is to solve every mental phenomena that has puzzled the world as easily as arranging a garden—it flatters the superficial with telling them that they too may become *philosophers*, and “at so small a cost!”—that they too, though ignorant of themselves, of the first principles of knowledge, may sneer at bygone “learned fools,” and thereby demonstrate how superior *they* are; and thus phrenology has become popular. Barbers, carpenters, joiners, artisans of all sorts “swell the throng with their tumultuous throats,” and run gaping after lecturers.

Yet has phrenology been of considerable service.—It has promoted great discussion, the only means of touching truth, and if it has spread abroad huge errors, it has been the means of much investigation into the nervous system, and has elicited many valuable additions to science—thus much we honour it. It will be said that we are ignorant of phrenology—granted; we are ignorant how “a thing can be and not be at the same time.” We cannot understand absurdity, though we took great pains with this one.

A SONG OF THE AFFECTIONS.

BY MAJOR CALDER CAMPBELL.

1.

FAR through the lapse of years,
 Blended with smiles and tears,
 Thy name comes o'er me like the dreamed-of swell
 Of Home's own seas,—which brings
 To memory many things
 Of mingled grief and glee, pent in the spirit's cell!

2.

Like the pure flames that burn
 In that same golden urn
 To high Minerva, Wisdom's Queen, devoted,
 Which (Amianthus-fed)
 Ne'er tremble nor are dead,
 Thy image in my heart lies bright,* although unnoted!

* “Like the flame of that golden lamp devoted to Minerva, whose wick of Amianthus never consumes.”—*Travels of Antenor*, vol. i. p. 27.

3.

There's not a dulcet sound,
A fragrance floating round,
A sight of beauty on the senses flung,
That wafts not to my view
In colours, oh! how true!
Thy voice, and all the charms that to thy being clung!

4.

Thou say'st thou ne'er wilt change,
That grief can ne'er estrange
The tender fervour of thy love for me,
It hath been steeped in tears—
It hath been drenched with fears—
And doubts (they say) diminish constancy.

5.

Thou say'st that time can fling
No frost-blight on the spring
Of young affection, in thine ardent breast;
Yet clouds have o'er it passed,
And rain fallen, thick and fast,
And such (they say) destroy fair Nature's vest.

6.

Thou say'st that absence ne'er
Can love enfeebled bear
To severed hearts, if love be fond and true;—
Our's hath been tried . . . alas!
Its warmth, its truth surpass
The love of woman,—holier, purer too!

7.

In silence and in tears,
Midst tumults, madness, fears—
By pangs unknown to others we have proved
How dangerous, yet how sweet
Is life, when brothers meet
Apart from man, to tell how they have loved!

8.

I trust thee!—I will fling
My heart upon the spring,
Whose sparkling waters of affection rise
Within thy youthful breast,
Telling of hope and rest,
And mirroring fair flowers and sunny skies!
